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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/875,084	06/07/2001	Satoshi Sano	010671	6212

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EXAMINER

NGUYEN, KIMNHUNG T

ART UNIT PAPER NUMBER

2677

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/875,084

Applicant(s)

SANO ET AL.

Examiner

Kimmhung Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6 and 7 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This Application has been examined. The claims 1-8 are pending. The examination results are as following.

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Caswell et al. (US 4,762,990).

Regarding claim 1, Caswell et al. discloses in figures 1 and 10, an optical scanning-type touch panel (see stylus 10) comprising an optical scanning unit; (laser 6)) for angularly scanning light in a plane substantially parallel to a predetermined region (see retro reflective surface, see column 2, lines 48-50); a mirrored deflecting unit (32) for deflecting scanning light of said optical scanning unit; and a light receiving unit (figure 10) for receiving the deflected scanning light (see column 6, lines 67-68 and column 7, lines 1-4), for detecting a scanning light cut-of position (see scanning light beam is interrupt by stylus 10, see column 3, lines 56-57), which is produced in said predetermined region by an indicator (see indicator member such as stylus, see column 3, lines 1-2), based on a light receiving output of said light receiving unit that corresponds to a scanning angle (see figure 1) wherein the deflecting unit has an asymmetrical

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shaped about an optical axis (see central opening 33 serves the function of permitting light from the laser 6, see fig. 10).

Regarding claim 2, Caswell et al. disclose in figure 10, the optical scanning-type touch panel, wherein the shape of said deflecting unit is asymmetrical in a scanning direction as discussed above.

3. Claim 6 is rejected under 35 U.S.C. 102(e) as being anticipated by Fujitsu Limited (EP patent 0897161 cited by Applicant).

Fujitsu discloses in figures 1 and 3, Fujitsu Limited discloses in figure 1 an optical scanning-type touch panel comprising: an optical scanning unit for angularly scanning light in a plane substantially parallel to a predetermined region (see two lights send/receive unit 1a, 1b); a deflecting unit for deflecting scanning light of said optical scanning unit; and a light receiving unit for receiving the deflected scanning light, for detecting a scanning light cut-off position (see cut-off position by finger), which is produced in said predetermined region by an indicator, based on a light receiving output of said light receiving unit that corresponds to a scanning angle (see abstract), and satisfying a condition: (see figure 3)

$d/2 + w < D \tan \delta$ , where D is a distance from said optical scanning unit (16a) to said deflecting unit (15a), w is a width on said deflecting unit from a path of said scanning light to an end on said predetermined region side, d is a beam width of said scanning light, and  $\delta$  is a scanning start angle, because Fujitsu Limited discloses in figures 3 and 5 an optical system having an distance (D) from optical scanning unit to the deflecting unit (see 15a), deflecting unit

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having a width (w), and a beam width of scanning (d), and (teta) or  $\delta$  is a scanning start angle (see figure 3).

From the figure 3, it satisfies a condition  $d/2+w < D \tan \delta$  (see attached paper of figure 3).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caswell et al. (US 4,762,990).

Caswell et al. discloses in figures 1 and 10, an optical scanning-type touch panel as discussed above. However, Caswell et al. does not disclose the shape of the deflecting unit is asymmetrical in a height direction; and a height of said deflecting unit is substantially equal to a height of the optical unit.

From the claims 3-4, it would have been obvious for Caswell et al.'s system to have the shape of the deflecting unit is asymmetrical in a height direction; and a height of said deflecting unit is substantially equal to a height of the optical unit as claimed since such a modification would have involved a mere change in the size/shape of a system. A change in size/shape is generally recognized as being within the level of ordinary skill in the art.

See In Rose, 105 USPQ 237 (CCPA 1995) and

See In re Reven, 156 USPQ 679 (CCPA 1968).

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Caswell et al. (US 4,762,990) in view of Brandt (US 5,438,446).

Caswell et al. discloses in figures 1 and 10 an optical scanning-type touch panel (see stylus 10) comprising an optical scanning unit; (laser 6)) for angularly scanning light in a plane substantially parallel to a predetermined region (see retro reflective surface, see column 2, lines 48-50); a deflecting unit (32) for deflecting scanning light of said optical scanning unit; and a light receiving unit (figure 9) for receiving the deflected scanning light (see column 6, lines 67-68 and column 7, lines 1-4), for detecting a scanning light cut-of position (see scanning light beam is interrupt by stylus 10, see column 3, lines 56-57), which is produced in said predetermined region by an indicator (see indicator member such as stylus, see column 3, lines 1-2), based on a light receiving output of said light receiving unit that corresponds to a scanning angle. However, Caswell et al. do not disclose the optical scanning unit is provided with a protective film having a maximum reflectance at an angle of incidence to a scanning angle at which a quality of the reflected light is minimum. Brandt discloses in figures 5-6, a reflectance of a aluminum mirror substrate having SiO<sub>2</sub> protective coating (protective film) and having the optimal thickness to be employed to minimize reflectance variations in the range of incident light beam scanning angles (that is the quality of reflected light is minimum), therefore, the protective film having maximum reflectance (see column 6, lines 26-47). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of using protective coating (protective film) and having the optimal thickness to be employed to minimize reflectance variations in the range of incident light beam scanning angles as taught by Brandt into the

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display system of Caswell et al. because this would provide the protective coating at the 15, 30 and 45 degrees angles of incidence of the source light beam through a range of potential protective layer thickness (see column 6, lines 26-30).

### ***Allowable Subject Matter***

7. Claim 8 is allowed.

8. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The present invention is directed to an optical scanning-type touch panel comprising an optical scanning unit for angularly scanning light in a plane substantially parallel to a predetermined region. The combination of the closest prior art, Caswell et al. (US 4,762,990), Fujitsu (EP 0897161) and Brandt (US 5,438,446) discloses a similar system. However, they fail to teach the optical scanning-type touch panel, wherein the predetermined region has a rectangular shape, and a width of said deflecting unit is substantially equal to a scanning surface opening width of the optical scanning unit in scanning a diagonal section of said predetermined region with light as claims 5 and 8.

### ***Response To Arguments***

9. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

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10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number is (571) 272-7698. The examiner can normally be reached on MON-FRI, FROM 8:30 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kimnhung Nguyen  
June 24, 2005

A handwritten signature in black ink, appearing to read 'Alexander Eisen', with a stylized, flowing script.

**ALEXANDER EISEN**  
**PRIMARY EXAMINER**  
**TECHNOLOGY CENTER 2600**